



***AIRPOWER I:
CAPABILITIES AND LIMITATIONS IN
AMERICAN AIRPOWER***

SYLLABUS

AY 18

**JOINT PROFESSIONAL MILITARY EDUCATION
PHASE I INTERMEDIATE LEVEL COURSE**

**UNITED STATES AIR FORCE
AIR COMMAND AND STAFF COLLEGE
*21st Century Leaders for 21st Century Challenges***

**AIR COMMAND AND STAFF COLLEGE
MAXWELL AFB, AL**

FOREWORD

This syllabus for the Airpower I course for the Air Command and Staff College, October-December 2017, provides both an overview of the course narrative, objectives, and questions, as well as a detailed description of each lesson to assist students in their reading and preparation for lecture and seminar. Included herein is information about course methods of evaluation, schedule, and the fulfilment of joint professional military education core goals.

Airpower represents one of the greatest inventions and challenges of modern times. How we approach that challenge is now in your hands.

SIGNED

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Course Director, Airpower I

APPROVED

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Dean

AIRPOWER I COURSE OVERVIEW

COURSE DESCRIPTION

Airpower I (AP I) examines the emergence and development of American airpower from World War I through the Vietnam War. This course analyzes the development of key ideas, capabilities, organizations, practices, and limitations that framed the conduct of air warfare in the first three quarters of the twentieth century. These events continue to inform debates about airpower's purpose, utility, and effectiveness. Course readings, lectures, and seminar discussions will cultivate adaptive leaders and critical airpower thinkers by challenging officers to examine the evolution of airpower and how it serves national strategic objectives.

COURSE OBJECTIVES

1. Analyze the development of American airpower and the organizations, technology, and strategies inherent in its employment.
2. Examine historical evidence to evaluate the capabilities and limitations of airpower in past and present conflicts.
3. Extrapolate the role that airpower can play in future military operations based on lessons of airpower heritage.

COURSE QUESTIONS

1. What is airpower and how is it effective in meeting national strategic objectives?
2. What are the lessons of the airpower experience and how are they useful to airpower leaders in present and future conflicts?
3. What are the relationships between airpower heritage, war theory, national security and leadership and how can context change these relationships?

COURSE ORGANIZATION AND NARRATIVE

The AP I course uses historical examples to analyze airpower's effectiveness as an instrument of national policy in the first three quarters of the twentieth century, up to and including the Vietnam War. The course also examines the role of airpower in the development of operational maneuver warfare and encourages students to think about how best to translate tactical and operational effects into desired strategic and political outcomes.

The course is organized into 15 course days made up of 14 hours of lecture and 28 hours of seminar. Special emphasis is placed upon the factors that empower and constrain airpower, the ways airpower can be effectively applied in conventional and irregular warfare, and the utility of airpower in future conflicts.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP1 addresses Intermediate-Level College Joint Learning Areas and Objectives for Joint Professional Military Education (JPME), established by the Chairman of the Joint Chiefs of Staff via the Officer Professional Military Education Policy (OPMEP), CJCSI 1800.01E, signed 29 May 2015. The course supports the following Joint Learning Areas and Objectives, listed below with points of explanation:

Learning Area Objective 1 – National Military Capabilities Strategy

- a. Comprehend the capabilities and limitations of US military forces to conduct the full range of military operations in pursuit of national interests.
 - Lessons AP-502, AP-503, AP-504, AP-505, AP-506, AP-508, AP-509, AP-511, AP-512, AP-513, AP-514, AP-515, AP-516, AP-517, AP-518, AP-519, AP-520, AP-521, AP-522, AP-523, AP-524, AP-525, AP-526, AP-527, AP-528, AP-529 discuss the capabilities and limitations of naval and air forces from both theoretical and historical contexts in achieving strategic objectives at the tactical and operational levels of war.
- c. Comprehend how the U.S. military is organized to plan, execute, sustain, and train for joint, interagency, intergovernmental, and multinational operations.
 - Lessons AP-505, AP-508, AP-509, AP-511, AP-512, AP-513, AP-518, AP-521, AP-522, AP-525, AP-526, AP-527, AP-528, AP-529 relate/examine historical and current US military and airpower structures (people/units, equipment, employment, limitations) to meet national-level military and political objectives in a complex and uncertain environment.

Learning Area Objective 2 – Joint Doctrine and Concepts

- b. Comprehend the interrelationship between Service doctrine and joint doctrine.
 - Lessons AP-503, AP-505, AP-510, AP-511, AP-512, AP-513, AP-525, AP-526, AP-527, AP-528 recognize the interrelationship between service doctrine and joint doctrine and the complexities of integrating airpower capabilities and effects that contrast historical/current airpower theories of employment.
- c. Apply solutions to operational problems in a volatile, uncertain, complex or ambiguous environment using critical thinking, operational art, and current joint doctrine.
 - Lessons AP-503, AP-505, AP-507, AP-508, AP-509, AP-510 AP-511, AP-512 AP-513, AP-514, AP-515, AP-518, AP-521, AP-522, AP-525, AP-526, AP-527, AP-528 examine both continuity and change in the conduct of war and the changing character of conflict. Additionally, they address the adaptation and assessment of framing/re-framing objectives, lines of effort, and measures of performance in meeting strategic questions and objectives.

Learning Area Objective 3 – Joint & Multinational Forces at the Operational Level of War

- b. Comprehend Joint Force command relationships.
 - Lessons AP-503, AP-505, AP-507, AP-509, AP-511, AP-513, AP-515, AP-517, AP-519, AP-521, AP-523, AP-525, AP-527, AP-528, AP-529 examine and analyze the strategic, operational, and tactical level conduct of air forces and its leaders in relation to the overall command structures and how the use of the airpower weapon contributes to the overall conduct of war, including continuity and change in the relationships between them.
- c. Comprehend the interrelationships among the strategic, operational, and tactical levels of war.
 - Lessons AP-503, AP-505, AP-507, AP-509, AP-511, AP-513, AP-515, AP-517, AP-519, AP-521, AP-523, AP-525, AP-527, AP-529 explain the theory

- and principles of joint operations at the operational level of war via historical case studies and examples.
- d. Comprehend how theory and principles of joint operations pertain to the operational level of war across the range of military operations to include traditional and irregular warfare that impact the strategic environment.
 - Lessons AP-503, AP-505, AP-507, AP-509, AP-511, AP-513, AP-515, AP-517, AP-519, AP-521, AP-523, AP-525, AP-527, AP-529 draw from both historical and contemporary examples of how the US military formulated theories and strategies to affect the outcome of strategic objectives.
 - Lessons AP-503, AP-505, AP-507, AP-509, AP-511, AP-513, AP-515, AP-517, AP-519, AP-521, AP-523, AP-525, AP-527, AP-529 apply the concept of decisive victory to understand historical and contemporary case studies.

Learning Area Objective 4 – Joint Planning and Execution Process

- c. Comprehend the integration of joint functions (command and control, intelligence, fires, movement and maneuver, protection and sustainment) to operational planning problems across the range of military operations.
 - Lessons AP-505, AP-506, AP-507, AP-508, AP-509, AP-510, AP-511, AP-512, AP-513, AP-514, AP-515, AP-519, AP-521, AP-522, AP-523, AP-524, AP-525, AP-526, AP-527, AP-528, AP-529 discuss the capabilities and limitations of operational planning and functions across the range of military operations in theoretical and historical context.
- f. Comprehend the roles that factors such as geopolitics, geostrategy, society, region, culture/diversity, and religion play in shaping planning and execution of joint force operations across the range of military operations.
 - Lessons AP-502, AP-503, AP-504, AP-505, AP-506, AP-507, AP-508, AP-509, AP-510, AP-511, AP-512, AP-513, AP-514, AP-515, AP-516, AP-517, AP-518, AP-519, AP-520, AP-521, AP-522, AP-523, AP-524, AP-525, AP-526, AP-527, AP-528, AP-529 examine the myriad of responses to the implementation of aviation and its capabilities in effecting the outcome of major conflict while being measured against geopolitical, societal, cultural, and religious factors to include an understanding of how to manage emerging vulnerabilities and the risks to US and global security interests.

Learning Area Objective 5 – Joint Command and Control

- a. Comprehend the organizational options, structures and requirements available to joint force commanders.
 - Lessons AP-512, AP-513, AP-514, AP-515, AP-518, AP-519, AP-522, AP-524, AP-525, AP-526, AP-527, AP-528 relate/examine historical and current US military and airpower structures (people/units, equipment, employment, limitations) to meet national-level military and political objectives in a complex and uncertain environment. Additionally, they address the ability to assess and adapt strategies across the spectrum.
- b. Comprehend the factors of intent through trust, empowerment and understanding (Mission Command), mission objectives, forces, and capabilities that support the selection of a specific C2 option.

- Lessons AP-507, AP-508, AP-509, AP-510, AP-511, AP-512, AP-513, AP-518, AP-521, AP-525, AP-526, AP-527, AP-528, AP-529 discuss the effects of the interplay of strategy and technology, functions of leadership and reliable intelligence in shaping the contours of an aerial campaign.

Learning Area Objective 6 – Joint Operational Leadership and the Profession of Arms

- Comprehend the role of the Profession of Arms in the contemporary environment.
 - Lessons AP-502, AP-503, AP-504, AP-505, AP-507, AP-509, AP-511, AP-513, AP-514, AP-515, AP-518, AP-519, AP-521, AP-523, AP-527, AP-529 examine the roles and actions of military leaders in the shaping and implementation of the Profession of Arms in the contemporary environment.
- Comprehend critical thinking and decision-making skills needed to anticipate and recognize change, lead transitions, and anticipate/adapt to surprise and uncertainty.
 - Lessons AP-502, AP-503, AP-504, AP-505, AP-507, AP-511, AP-512, AP-513, AP-514, AP-518, AP-519, AP-521, AP-522, AP-523, AP-524, AP-525, AP-526, AP-527, AP-529 provide examples of theorists and practitioners anticipating and recognizing change in the conduct of war, whether the sources of such change are political, social, cultural or technological.
- Comprehend the ethical dimension of operational leadership and the challenges it may present when considering the values of the Profession of Arms.
 - Lessons AP-505, AP-507, AP-509, AP-510, AP-510, AP-511, AP-512, AP-513, AP-514, AP-515, AP-518, AP-519, AP-527, AP-529 examines and analyzes the human dimension and the challenge it presents in decision-making and strategy in relation to the values of the Profession of Arms.
- Communicate with clarity and precision.
 - Writing assignments AP-801 and AP-802 prepare students to think and write critically about military operations.
- Analyze the importance of adaptation and innovation on military planning and operations.
 - Lessons AP-502, AP-503, AP-504, AP-505, AP-507, AP-508, AP-509, AP-510, AP-511, AP-512, AP-513, AP-514, AP-515, AP-516, AP-517, AP-518, AP-519, AP-521, AP-522, AP-523, AP-525, AP-526, AP-527, AP-528, AP-519 analyze the importance of adaption and innovation on military planning and operations in both military theory and contemporary and historical cases.

SPECIAL AREAS OF EMPHASIS (SAE)

SAE 1: Transregional, Multi-function, Multi-domain Joint Warfighting:

AP-510, AP-512, AP-513, AP-521, AP-526, AP-527

SAE 2: Strategic Deterrence in the 21st Century Deterrence and Escalation Dynamics:

AP-518, AP-519, AP-520, AP-521, AP-522, AP-523

SAE 3: Military Operations in a Contested Cyberspace Environment:

AP-518

SAE 4: Countering WMD:

AP-519, AP-521, AP-523

SAE 5: Nontraditional Threats to Security and Stability:

AP-524, AP-525

SAE 6: Operations Assessment:

AP-518

COURSE REQUIREMENTS

- 1. READINGS.** Students are expected to complete all assigned readings for the day prior to lecture and seminar. Students are encouraged to review the lesson objectives and overviews provided in the syllabus before reading the assigned texts.
- 2. LECTURES.** Students will attend faculty lectures relating to assigned readings and seminar. These presentations complement the readings and seminar discussion, and therefore enhance knowledge of the course concepts. Lectures provide additional historical background and different perspectives to stimulate and enhance learning in seminar.
- 3. SEMINAR PARTICIPATION.** Student participation in seminar discussions is vital to the individual learning and success. Each member of seminar is expected to contribute to the discussion.
- 4. WRITTEN ASSIGNMENTS.** Two graded written assignments fulfill the requirements of the Airpower I course: a four-page take-home mid-term examination, and an in-class comprehensive final exam. All written work must include an acknowledgement of colleagues who made an intellectual contribution to the work as the first citation.

METHODS OF EVALUATION. The four-page take-home examination is worth 50 percent of the final course grade; the in-class comprehensive final examination is worth 50 percent of the final course grade.

COURSE ADMINISTRATION

There are two types of readings in this course: 1) readings from books issued by ACSC; and 2) selected electronic files posted on Canvas. Students can access the syllabus, course calendar, and selected readings as well as other supplemental materials online. In addition, lecture slides will be posted when available after the lecture.

ACSC provides students with copies of the following course books, which must be returned at the conclusion of the course:

- Tami Davis Biddle, *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas about Strategic Bombing, 1914-1945* (Princeton University Press, 2004).
- Dik A. Daso, *Hap Arnold and the Evolution of American Airpower* (Smithsonian Books, 2001).
- Richard Overy, *The Bombers and the Bombed: Allied Air War Over Europe 1940-1945* (Viking, 2013).
- Thomas A. Hughes, *Over Lord: General Pete Quesada and the Triumph of Tactical Air Power in World War II* (Free Press, 2002).
- Thomas E. Griffith, *MacArthur's Airman: General George C. Kenney and the War in the Southwest Pacific* (University Press of Kansas, 1998).
- Conrad Crane, *American Airpower Strategy in World War II: Bombs, Cities, Civilians, and Oil* (University Press of Kansas, 2016).
- Ralph H. Nutter, *With the Possum and the Eagle: The Memoir of a Navigator's War Over Germany and Japan* (University of North Texas Press, 2012).
- Michael D. Gordin, *Five Days in August: How World War II Became a Nuclear War* (Princeton University Press, 2015).
- Conrad Crane, *American Airpower Strategy in Korea, 1950-1953* (University Press of Kansas, 2000).
- Neil Sheehan, *A Fiery Peace in a Cold War: Bernard Schriever and the Ultimate Weapon* (Random House, 2009).
- Philip Meilinger, ed., *The Paths of Heaven: The Evolution of Air Power Theory* (School of Advanced Airpower Studies, 1999).
- Mark Clodfelter, *The Limits of Airpower* (Free Press, 1989).
- James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (University Press of Kansas, 2003).
- Marshall Michel, *The 11 Days of Christmas: America's Last Vietnam Battle* (Encounter Books, 2001).

Please refer any questions to Dr. Trevor Albertson (Course Director) or Dr. Jordan Hayworth (Deputy Course Director).

AIRPOWER I COURSE SCHEDULE

DAY 0

DATE: 6 October 2017

LESSON OBJECTIVES

1. Explain the course objectives, course questions, and course narrative.
2. Review the course syllabus, methods of evaluation, and expectations for seminar.
3. Comprehend the development of airpower in the First World War

LESSON OVERVIEW

AP-500 (L): Course Overview and World War I Airpower (Albertson/Figiera)

Overview: “Airpower” refers to the air, space, and cyber assets available to military leaders for use in conflicts. This course is designed to examine how airpower can contribute effectively to a nation’s security, as well as how it has been employed in past conflicts and how it might influence future wars. This day’s lecture introduces students to the key concepts and framework of the course. In addition, the lecture will provide background and context on the use of airpower in the First World War and how it influenced airpower leaders during the interwar period and affected the major conflicts of the twentieth century.

CONTACT HOURS: 1.0-hour lecture

AP-501 (S): Course Introduction

Overview: In this seminar, instructors introduce themselves to their seminars, discuss classroom policies, and set the stage for seminar discussions scheduled for Day 1.

CONTACT HOURS: 1.0-hour seminar

REQUIRED READINGS

None.

DAY 1

LESSON OBJECTIVES

1. Comprehend Biddle's fundamental argument about the nature of rhetoric and reality as it relates to the promise of airpower during the interwar period.
2. Analyze how the airpower experiences of the First World War shaped post-war evaluations of airpower effectiveness and influenced assumptions of airpower's potential.
3. Compare and contrast the development of British and American conceptions of strategic and tactical airpower in the interwar period.

LESSON OVERVIEW

AP-502 (L): Interwar Airpower Theory & Application in France, Germany, & USSR (Muller)

Overview: This lecture examines the myriad of responses to the aviation experiences of the First World War that were followed by three major European powers in the interwar period. By comparing the types of aerial services created by France, Germany and the Soviet Union, Dr. Muller of SAASS demonstrates the "paths not taken" by the British and American airpower organizations, and shows there was no common conception of aviation in the interwar period.

CONTACT HOURS: 1.0-hour lecture

AP-503 (S): Emergence of Airpower Theory and Doctrine in Britain and the United States

Overview: As the world's first independent air service, the Royal Air Force sought to formulate coherent airpower theories and doctrines which took into account the perceived lessons of the First World War as well as the realities of Great Britain's geopolitical and strategic situation in the 1920s and 1930s. Because of a variety of factors, including institutional imperatives, economic considerations, and strategic calculation, the RAF's senior leadership, personified by Air Marshal Hugh Trenchard, emphasized strategic attack as the service's primary role. Other thinkers, most notably Wing Commander John Slessor, developed doctrinal frameworks for integrating air and ground assets which provided the basis for aerial interdiction (AI) and close air support (CAS) capabilities in the Second World War. Located at Maxwell AFB in the 1930s, the Air Corps Tactical School (ACTS) was the intellectual center for the development of American airpower theory and doctrine between the two world wars. Building on the airpower theories constructed by European thinkers and practitioners such as Douhet, Trenchard, and others, ACTS combined them with uniquely American perspectives on the utility and purpose of airpower in modern war. The result was a set of ideas which directly influenced the formulation of theories of strategic bombardment aimed at the destruction of an opposing power's industrial capacity, while acknowledging the potential of strategic airpower to impair enemy morale and will to fight.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Tami Davis Biddle, *Rhetoric and Reality in Air Warfare*, pp. 1-175.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-502 supports the following Joint Learning Areas and Objectives for JPME: 1a, 4f, 6a, 6b, and 6f.

AP-503 supports the following Joint Learning Areas and Objectives for JPME: 1a, 2b, 2c, 3b, 3c, 3d, 3f, 4f, 6a, 6b, 6e, and 6f.

DAY 2

DATE: 19 October 2017

LESSON OBJECTIVES

1. Analyze the formative experiences and contexts that shaped Arnold's development as a leader after the First World War.
2. Examine and assess the conclusions Arnold drew about how to effectively organize, manage, and resource airpower for current operations and the future.
3. Evaluate the utility of an organization's strategy based on continuous scientific advancement.

LESSON OVERVIEW

AP-504 (L): Billy Mitchell (Grumelli)

Overview: Perhaps the most recognizable as well as controversial figure in the history of American airpower is William "Billy" Mitchell. Arriving in France in April 1917, Mitchell became the leader of the nascent American air effort and eventually the commander of US aviation at the front. His experience of war shaped and energized his postwar ideas for the organization and future development of aviation, both civilian and military. His strategic vision for airpower writ large was centered on an independent air force as the arm of decision in future wars. The nature of Mitchell's aggressive advocacy for his ideas both shaped and hindered the development of airpower in the United States and directly led to his court-martial in 1925.

CONTACT HOURS: 1.0-hour lecture

AP-505 (S): Innovation and Interwar Airpower Theory, Technology, and Organization

Overview: General of the Air Force Henry Harley "Hap" Arnold was the central figure in the organizational development of American military airpower that led to the creation of the USAF as an independent service in 1947. Before and during the Second World War, his institutional leadership and vision set the foundation for the strategically coherent employment of American airpower on a global scale. His efforts proved indispensable to the Allies' victory over Nazi Germany and Imperial Japan, and provided the USAF with much of its strategic orientation in the early years of the Cold War.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Dik A. Daso, *Hap Arnold and the Evolution of American Airpower*, pp. 1-6, 101-214.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-504 supports the following Joint Learning Areas and Objectives for JPME: 1a, 4f, 6a, 6b, 6f

AP-505 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2b, 2c, 3b, 3c, 3d, 3f, 4c, 4f, 6a, 6b, 6c, 6e, 6f

DAY 3

DATE: 23 October 2017

LESSON OBJECTIVES

1. Comprehend the broader strategic context that shaped the RAF's approach to air defense and the Luftwaffe's approach to air attack in 1940.
2. Understand the principal phases of the air campaign over Britain in the summer of 1940 within the broader frameworks of airpower theory and practice.
3. Evaluate Bomber Command's conduct of the early bombing war and the lessons its experience provides for airpower theory and practice.

LESSON OVERVIEW

AP-506 (L): Blitzkrieg in the Second World War (Citino)

Overview: The German campaigns between 1939 and 1940 were so decisive that it can be said that they changed the face of war forever. As this lecture will demonstrate, the German *blitzkrieg* was a product of careful planning and training by the German army and air force. The new way of war privileged highly mobile ground systems (tanks) and aircraft in combined-arms assaults to achieve operational and strategic breakthroughs against enemy defenses. Although deceptively simple in principle, it was a complex system that required intensive planning and logistical support. For all of its advantages, the system did not overcome Germany's strategic disadvantages in the Second World War. It also provided the Allies, by way of replicating aspects of the German *blitzkrieg* within their own military systems, one way of ultimately defeating the Third Reich.

CONTACT HOURS: 1.0-hour lecture

AP-507 (S): Defensive Counter-Air and the Early Bombing War

Overview: The Battle of Britain remains the only significant example of a successful defensive air campaign in history. Consequently, it merits careful study by military professionals. The battle's conduct and outcome provide compelling insights into the dynamics of such universal factors in air warfare as the interplay of strategy and technology, the function of leadership and reliable intelligence in shaping the contours of an aerial campaign, and the elusive nature of air superiority. As one of the first major, sustained aerial encounters of the Second World War, the Battle of Britain exercised an important influence on the mindsets of the American and British airmen who, later in the war, sought to erode Germany's capacity and will to fight by means of a major strategic bombing campaign.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Robin Higham, "The Royal Air Force and the Battle of Britain," in Benjamin F. Cooling, ed., *Case Studies in the Achievement of Air Superiority*. Washington, D.C.: Center for Air Force History, 1991, pp. 115-171.
2. Richard Overy, *The Bombers and the Bombed*, pp. 33-106.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-506 supports the following Joint Learning Areas and Objectives for JPME: 1a, 4c, 4f

AP-507 supports the following Joint Learning Areas and Objectives for JPME: 2c, 3b, 3c, 3d, 3f, 4c, 4f, 5b, 6a, 6b, 6c, 6e, 6f

DAY 4

DATE: 26 October 2017

LESSON OBJECTIVES

1. Understand the assumptions and expectations that shaped the planning and execution of the CBO.
2. Examine the historical evidence to evaluate the capabilities and limitations of airpower in past and present conflicts.
3. Extrapolate the role that airpower can play in future military operations based on lessons of airpower heritage.

LESSON OVERVIEW

AP-508 (L): Planning for the Combined Bomber Offensive (Crane)

Overview: The CBO was designed to break the will of Nazi Germany through targeting civilian society and industry. Based on his groundbreaking book on American airpower strategy in the Second World War, Conrad Crane will highlight the challenges in planning this massive and intensive strategic air offensive. American airmen remained focused on the destruction of war-making capacity despite the likelihood of inflicting horrific casualties on German civilians. This lecture will cover planning for the CBO and establish the context for an in-depth analysis of the bombing campaigns against Germany and Japan.

CONTACT HOURS: 1.0-hour lecture

AP-509 (S): The Combined Bomber Offensive and the Efficacy of Strategic Attack in Europe

Overview: The strategic air offensive against Germany defined strategic bombardment in both history and memory. It was the most complex air offensive ever undertaken. The U.S. Army Air Forces (USAAF) were compelled to adapt in real-time along a steep learning curve when operations did not mirror planning. Regardless, American, British, and Commonwealth airmen mounted an all-out air offensive against German civilian, military, industrial, petroleum, synthetic fuels, and transportation targets in an effort to destroy Germany's ability to continue to fight the Allies. The USAAF's contribution to the Combined Bomber Offensive directly influenced its subsequent institutional independence.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Richard Overy, *The Bombers and the Bombed*, pp. 107-317.
2. Tami Davis Biddle, *Rhetoric and Reality in Air Warfare*, pp. 270-288.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-508 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2c, 4c, 4f, 5b, 6f

AP-509 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2c, 3b, 3c, 3d, 3f, 4c, 4f, 5b, 6a, 6c, 6e, 6f

DAY 5

DATE: 2 November 2017

LESSON OBJECTIVES

1. Assess how an air force's approach to tactical airpower affects military operations and thus the achievement of national (coalition) political objectives.
2. Identify factors that constrain tactical airpower and examine ways to mitigate those constraints.
3. Evaluate the extent to which tactical airpower contributed to victory in the Second World War.

LESSON OVERVIEW

AP-510 (L): Overview of the Second World War from 1939 to 1945 (Lukasik)

Overview: This lecture provides a contextual overview of the course and conduct of the Second World War with an emphasis on its political and grand strategic dynamics. The principal purpose is to situate the relevant historical case studies featured in the AP I course in the wider framework of the war's character as a global industrial conflict waged by coalitions. The lecture focuses on the role of airpower as a key determinant of the success or failure of the war's dominant strategic initiatives. The lecture highlights airpower's capabilities and limitations as an instrument of national policy in a complex environment.

CONTACT HOURS: 1.0-hour lecture

AP-511 (S): The Air-Ground Team in North Africa and Europe

Overview: Beyond the strategic bombardment campaign against Axis forces in the European theater, tactical airpower provided close air support to troops on the ground and carried out aerial interdiction missions in North Africa and Europe. These efforts crippled the German army's ability to maneuver on the battlefield while placing enormous pressure on its lines of communications and resupply. Each of these missions proved both effective and important in the eventual Allied victory. This seminar examines the role of innovative airmen such as O. P. Weyland, Elwood "Pete" Quesada, Joe Cannon, and Arthur Coningham in developing the theories and practices of tactical airpower.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Thomas Hughes, *Over Lord*, pp. 1-19, 83-249.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-510 supports the following Joint Learning Areas and Objectives for JPME: 2b, 2c, 4c, 4f, 5b, 6c, 6f

AP-511 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2b, 2c, 3b, 3c, 3d, 3f, 4c, 4f, 5b, 6a, 6b, 6c, 6e, 6f

DAY 6

DATE: 6 November 2017

LESSON OBJECTIVES

1. Analyze how the US adapted airpower to the Pacific Theater's strategic environment and embraced greater flexibility.
2. Understand the roles and responsibilities of the theater air commander in relation to the theater commander's strategic priorities.
3. Examine the conditions General Kenney faced while serving under General MacArthur's command.

LESSON OVERVIEW

AP-512 (L): Naval Aviation in the Pacific (Springer)

Overview: This lecture provides an overview of naval airpower operations in the Pacific Theater during World War II. It begins with an examination of the Pearl Harbor attack, which demonstrated the revolutionary nature of aircraft carriers, and follows the U.S. Navy's counteroffensive through the Central Pacific, culminating with the air operations against the Marianas Islands, a series of attacks designed primarily to create airbases for strategic attacks against the Japanese homeland.

CONTACT HOURS: 1.0-hour lecture

AP-513 (S): George Kenney: Airpower Leadership in Joint, Combined, and Coalition Operations

Overview: The air campaign in the Southwest Pacific during the Second World War is not as well-known as other, more high-profile air campaigns of that conflict. Nonetheless, it proved a crucial element in the larger strategic context, which framed the ability of American forces to defeat Imperial Japan. It also provided the backdrop for the emergence of George Kenney as an airpower leader whose success in confronting a set of leadership and operational challenges marked him as one of the most effective and innovative American air commanders of the twentieth century. Kenney's ability to direct an effective air campaign in a complex operational environment with minimal resources makes his leadership worthy of careful study by contemporary military professionals.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Thomas E. Griffith, *MacArthur's Airman: General George C. Kenney and the War in the Southwest Pacific*, pp. 46-176, 231-247.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-512 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2b, 2c, 4c, 4f, 5a, 5b, 6b, 6c, 6f

AP-513 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2b, 2c, 3b, 3c, 3d, 3f, 4c, 4f, 5a, 5b, 6a, 6b, 6c, 6e, 6f

DAY 7

DATE: 9 November 2017

LESSON OBJECTIVES

1. Comprehend the role of total warfare in shaping the operational and strategic context of the air campaign against Japan.
2. Evaluate the contributions of strategic airpower innovations that resulted in the defeat of Japan.
3. Analyze the leadership of General LeMay in the strategic air campaign against Japan.

LESSON OVERVIEW

AP-514 (L): The Normalization of the Destruction of Cities: The Transnational History of Bombing Japan (Garon)

Overview: At the outbreak of World War II in 1939, President Roosevelt called upon the warring nations to refrain from bombing “civilian populations or unfortified cities.” Yet by 1945, the USAAF was doing precisely that, targeting densely populated areas in 64 Japanese cities before dropping the atomic bombs. This lecture spotlights the role of transnational knowledge in this process, as U.S. officers and civilian experts studied the ideas of interwar European proponents of strategic bombing like Douhet, as well as the evolving tactics of British and U.S. area-bombing in Europe. By 1945, the USAAF had become persuaded of the value of massive urban area attacks, incendiary bombing, and even the possibility of destroying civilian “morale.”

CONTACT HOURS: 1.0-hour lecture

AP-515 (S): Strategic Airpower Against Japan

Overview: The strategic bombing of Germany, though an important part of the effort, failed to deliver on the ultimate promise of “victory without ground invasion.” With the war in Asia driving towards an amphibious landing of terrible promise, the newly operational B-29 had only a few short months to realize Douhet and Mitchell’s visions of strategically effective airpower, replacing the bloodshed of ground combat. This seminar examines the USAAF’s air campaign against Japan and the emergence to prominence of Curtis E. LeMay, one of the most successful operational commanders in the history of American airpower.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Conrad Crane, *American Airpower Strategy in World War II*, pp. 1-13, 64-132, 161-186.
2. Ralph H. Nutter, *With the Possum and the Eagle: The Memoir of a Navigator’s War Over Germany and Japan*, pp. ix-xii, 220-285.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-514 supports the following Joint Learning Areas and Objectives for JPME: 1a, 2c, 4c, 4f, 5a, 6a, 6b, 6c, 6f

AP-515 supports the following Joint Learning Areas and Objectives for JPME: 1a, 2c, 3b, 3c, 3d, 3f, 4c, 4f, 5a, 6a, 6c, 6e, 6f

DAY 8 – MIDTERM EXAM TURN-IN

DATE: 13 November 2017

LESSON OBJECTIVES

1. Analyze the airpower narrative presented in the film.
2. Discuss the film's assumptions and promises of airpower presented.
3. Evaluate the film's depiction of airpower effectiveness and cognitive biases present in the images and language used to represent the belligerents.

LESSON OVERVIEW

AP-516 (L): *Victory Through Airpower* (Film)

Overview: Produced by Walt Disney Studios with the co-operation of the U.S. government in 1943, *Victory Through Airpower* is a cinematic adaptation of the book by the same title written by aircraft designer and airpower advocate Alexander P. de Seversky. Both the book and the film reflect broadly held assumptions about what airpower could accomplish as an instrument of national policy in the war against Nazi Germany and Imperial Japan. *Victory Through Airpower* offers insight into the official rhetoric about airpower capabilities in the early phases of America's involvement in the Second World War, and represents a vivid counterpoint to the operational realities of the USAAF's contribution to the Combined Bomber Offensive, which has been examined in previous seminars.

CONTACT HOURS: 1.5-hour film

AP-517 (S): *Victory Through Airpower* Discussion

Overview: This seminar provides instructors and students time to engage in an analytical discussion of *Victory Through Airpower* to situate the film's principal themes in the broader context of the issues underpinning the course. Students are encouraged to place particular emphasis on elaborating how the film encapsulates the airpower concepts and ideas which defined the development of airpower before the Second World War.

CONTACT HOURS: 1.0-hour seminar

REQUIRED READINGS

None.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-516 supports the following Joint Learning Areas and Objectives for JPME: 1a, 4f, 6f

AP-517 supports the following Joint Learning Areas and Objectives for JPME: 1a, 3b, 3c, 3d, 3f, 4f, 6e, 6f

DAY 9

DATE: 16 November 2017

LESSON OBJECTIVES

1. Analyze the influence of traditional airpower theory on American atomic strategy at the end of the Second World War.
2. Evaluate the extent to which the atomic bombings led to Japanese surrender in August 1945.
3. Examine the legacy of the attacks on Hiroshima and Nagasaki in American military and nuclear strategy.

LESSON OVERVIEW

AP-518 (L): Building a Global Air Force: Curtis LeMay and Strategic Air Command (Albertson)

Overview: The career of Curtis E. LeMay, one of the U.S. Air Force's most prominent and controversial leaders, represents a case study in a successful transition from operational to institutional leadership. LeMay's reputation as a highly effective combat leader in the Combined Bomber Offensive and in the strategic bombing campaign against Japan in the Second World War provided the basis for his emergence as a foundational leader of Strategic Air Command (SAC). SAC was the lynchpin of America's strategy of nuclear deterrence during the Cold War. This lesson examines LeMay's progression from combat command to institutional leadership, and serves as the basis for a discussion about his long-term influence on the USAF development into an organization capable of projecting airpower for strategic effect on a global scale.

CONTACT HOURS: 1.0-hour lecture

AP-519 (S): The Atomic Bomb

Overview: The end of World War II in the Pacific remains one of the most examined periods in history. Several arguments compete for acceptance as to why Japan surrendered to the Allies. Was it the firebombing raids against Japanese cities? The naval blockade? The impending amphibious invasion? The Soviet declaration of war? The atomic bombings of Hiroshima and Nagasaki? It is this last argument, concerning the atomic bombings, which many Americans cite as the definitive reason Japan surrendered. For over 70 years, airpower advocates have accepted this same assumption: that the use of atomic weapons—employed by airpower—ended the war. This belief has served as the basis for contemporary nuclear deterrence and, perhaps, the relative peace between the world's great powers since the end of the war. The history, however, is less clear and many questions are yet unanswered. Was airpower responsible for ending the war? This week's reading engages that issue. Understanding the complexities of this 20th century event and subsequent debate is vital for military professionals operating in the 21st century.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Michael Gordin, *Five Days in August*, all.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-518 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2c, 4f, 5a, 5b, 6a, 6b, 6c, 6f

AP-519 supports the following Joint Learning Areas and Objectives for JPME: 1a, 3b, 3c, 3d, 3f, 4c, 4f, 5a, 6a, 6b, 6c, 6e, 6f

DAY 10

DATE: 27 November 2017

LESSON OBJECTIVES

1. Analyze the various airpower strategies pursued by UN/US forces as part of the Korean War.
2. Evaluate the planning and execution of the airpower campaign during the Korean War in relation to the political context of the Cold War.
3. Examine the importance of new technology and cognitive bias in the Korean War air campaigns.

LESSON OVERVIEW

AP-520 (L): Overview of the Cold War (Donnelly)

Overview: This lecture will discuss the origins of the Cold War and the early years of the conflict. The history of how and why the Cold War started has been debated by historians and political scientists for decades. Ideological differences and new evidence, particularly since the fall of the Soviet Union, have fueled a number of revisions and competing interpretations that make this history both challenging and fascinating. This lecture will provide students with an overview of the events, which led to the Cold War and how the conflict developed in the late 1940s through the 1950s.

CONTACT HOURS: 1.0-hour lecture

AP-521 (S): American Airpower Strategy in Korea

Overview: In Korea, a USAF increasingly focused on developing its nuclear capability faced a conventional conflict where strategic airpower did not enable achievement of wartime goals. The disconnect between strategic airpower capability and limitations imposed by national policy challenged airpower leaders to develop effective strategy to win a limited war in the midst of the larger Cold War context. Forced to adapt, the USAF maintained air superiority, countering communist numerical superiority on the ground and applying pressure to communist forces, which eventually resulted in a negotiated cease-fire.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Conrad Crane, *American Airpower Strategy in Korea*, pp. 1-9, 40-92, 110-131, 155-184.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-520 supports the following Joint Learning Areas and Objectives for JPME: 1a, 4f

AP-521 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2c, 3b, 3c, 3d, 3f, 4c, 4f, 5b, 6a, 6b, 6e, 6f

DAY 11

DATE: 30 November 2017

LESSON OBJECTIVES

1. Understand the organizational challenges leading to the development of intercontinental ballistic missiles (ICBM).
2. Analyze the Eisenhower administration's influence on the development of American nuclear strategy.
3. Examine the differences between conventional and nuclear airpower to include the nuclear revolution and the principles of strategic nuclear theory.

LESSON OVERVIEW

AP-522 (L): American Nuclear Strategy to the Cuban Missile Crisis (Redman)

Overview: This lecture provides an overview of U.S. nuclear policy from 1945 through 1962. John Lewis Gaddis identified five strategies of containment that informed U.S. policy during the Cold War. This lecture will examine the first four: the original concept as presented by George Kennan in the "long telegram" and expressed by President Harry Truman (1947-1949); Eisenhower, Dulles, NSC-68, and the imperative of the Korean War (1950-1953); Eisenhower, Dulles, and "New Look" (1953-1961); and the early Kennedy Presidency and the beginnings of "Flexible Response." The lecture examines how national security strategy and national military strategy adapted to the strategic change brought about by nuclear weapons and the rise of the Soviet Union in the two decades after the end of the Second World War.

CONTACT HOURS: 1.0-hour lecture

AP-523 (S): The USAF on the Verge of the Missile Age

Overview: Enabling complex organizations with disparate cultures to focus on and achieve a single objective is an essential element of military leadership. The U.S. race to field an operational ICBM before the Soviet Union exemplifies how leaders are challenged in complex organizations. This seminar examines how General Bernard Schriever and his management team rose to the occasion to integrate the technologically complex domains of air and space power in new ways and at a rapid pace to develop the Atlas ICBM and field a leg of the U.S. nuclear triad. The technological achievements of the Atlas program are astounding and made even more significant when comparing its development schedule to the development schedule of today's technologically complex programs. Schriever's contributions embody an important advance in systems thinking and continue to shape modern space and acquisition processes.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Neil Sheehan, *A Fiery Peace in a Cold War: Bernard Schriever and the Ultimate Weapon*, pp. xv-xix, 315-457.
2. Karl Mueller, "Strategic Airpower and Nuclear Strategy: New Theory for a Not-Quite-So-New Apocalypse," in Philip Meilinger, ed., *The Paths of Heaven*, pp. 279-308.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-522 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2c, 4c, 4f, 5a, 6b, 6f

AP-523 supports the following Joint Learning Areas and Objectives for JPME: 1a, 3b, 3c, 3d, 3f, 4c, 4f, 6a, 6b, 6e, 6f

DAY 12

DATE: 4 December 2017

LESSON OBJECTIVES

1. Analyze the role of airpower theory and Air Force organizational culture in shaping ideas about the employment of airpower in Southeast Asia.
2. Examine the concept of positive and negative political objectives as a factor shaping the utilization of airpower in limited and irregular conflicts.
3. Assess the employment of airpower in unconventional roles in Vietnam, and the lessons this provides the modern joint warfighter.

LESSON OVERVIEW

AP-524 (L): The First Indochina War: Prelude to America's Vietnam War (Hayworth)

Overview: This lecture examines the complex geopolitical and strategic situation that led the United States into an ill-defined conflict on the other side of the globe. In the two decades before America's Vietnam War, the French – with substantial American support – fought their own conflict to retain control of Southeast Asia, combatting the same opponents the Americans would face in the 1960s and early 1970s. This was a war against an outmatched opponent, but a war subject to such severe strategic and tactical limitations that it has often been characterized as “unwinnable,” a view held by many French politicians and military leaders. The decline of French power in Vietnam terrified the Americans, who feared that Communism would rapidly fill the void left by decolonization. Therefore, the United States – and the USAF – found itself tasked with a myriad of new responsibilities ranging from battlefield support, to strategic bombing, to allied training, to support of counter insurgency. This strategic mandate was ill-defined at best. Despite Cold War concerns, the Americans ultimately did not directly intervene to save French Indochina, which was finally overthrown as a result of the Vietnamese victory at Dien Bien Phu in 1954. The Americans, however, saw protecting the newly independent and anti-communist South Vietnam as a geopolitical imperative. The outcome and legacy of the First Indochina War paved America's road to full-scale military involvement in Southeast Asia.

CONTACT HOURS: 1.0-hour lecture

AP-525 (S): Airpower in Irregular Warfare: The Case of Vietnam

Overview: This seminar will examine early American thinking on the use of military force – particularly airpower – to achieve American political objectives in Southeast Asia. What lessons did World War Two and Korea provide for American military strategy and airpower employment in a limited war like Vietnam? This seminar will evaluate American training programs in South Vietnam as well as American direct involvement in the early years of the conflict. Assessing the arguments of the USAF, the SECDEF, and the Joint Chiefs of Staff during the Eisenhower, Kennedy, and Johnson administrations, it will provide a platform for a broader discussion concerning the utility of airpower in irregular wars. What aspects of American airpower heritage were helpful in the Vietnam War? Conversely, what aspects of that heritage hindered the effective use of airpower by the United States?

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Mark Clodfelter, *The Limits of Airpower*, pp. ix-xvi, 1-72.
2. James Corum and Wray Johnson, *Airpower in Small Wars*, pp. 1-10, 233-274.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-524 supports the following Joint Learning Areas and Objectives for JPME: 1a, 4c, 4f, 5a, 6b

AP-525 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2b, 2c, 3b, 3c, 3d, 3f, 4c, 4f, 5a, 5b, 6b, 6e, 6f

DAY 13

DATE: 7 December 2017

LESSON OBJECTIVES

1. Analyze how the US Air Force responded organizationally to fighting a major theater war.
2. Assess the impact of airpower on the ground war in Vietnam.
3. Examine how political objectives influenced the employment of airpower in the Vietnam War.

LESSON OVERVIEW

AP-526 (L): The Development of Army Aviation and the Airmobile Concept (Terino)

Overview: While the Air Force focused increasingly on the strategic mission after Korea, the experiences of that war sparked a renaissance in Army aviation thinking. Concerned about both the ability to operate on a nuclear battlefield and the Air Force's ability to provide close air support, the Army embraced the helicopter as the answer to both problems. The airmobile role as a troop transport and the attack role as a gunship followed. The new mission led to a turf battle with the Air Force but ultimately resulted in a remarkable new capability that took advantage of the speed and firepower of the aerial weapon to transform the Army. The first test of this concept, in the Ia Drang Valley of South Vietnam, demonstrated it was viable, but that it would also continue to require close air support from an Air Force equipped for and committed to this mission.

CONTACT HOURS: 1.0-hour lecture

AP-527 (S): Rolling Thunder and the Air-Ground War

Overview: The Air Force struggled to adjust to the ground war in South Vietnam, a role it had neither equipped nor prepared for, but one that was critical to a successful strategic outcome in the war. The Air Force adapted and provided increasingly effective support to the ground forces, but the ground strategy could not address the underlying causes of the insurgency, nor prevent the insurgents from building an effective organization. In the end, the Air Force learned valuable lessons about conventional war and partnering with the joint team, but it could not capitalize on this capability in South Vietnam.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Mark Clodfelter, *The Limits of Airpower*, pp. 73-146.
2. John Sbrega, "Southeast Asia," *Case Studies in Close Air Support*, pp. 411-473.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-526 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2b, 2c, 4c, 4f, 5a, 5b, 6b, 6f

AP-527 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2b, 2c, 3b, 3c, 3d, 3f, 4c, 4f, 5a, 5b, 6a, 6b, 6c, 6e, 6f

DAY 14

DATE: 11 December 2017

LESSON OBJECTIVES

1. Analyze the political aspects of the Vietnam War that led to the Linebacker I and II campaigns.
2. Examine the role of Strategic Air Command (SAC) in the operational aspects of Linebacker II.
3. Assess the utility and effectiveness of Linebacker II in ending the Vietnam War.

LESSON OVERVIEW

AP-528 (L): Airpower Effectiveness in Southeast Asia (Pavelec)

Overview: This lecture provides an overview of the air war over Southeast Asia and the use of the air weapon for decisive, strategic effect from 1965-1972. During this period the USAF and Navy conducted an air war over North Vietnam to achieve U.S. political objectives with limited success while the US also conduct bombing campaigns in Laos and Cambodia. This lecture will outline the campaigns, as well as the effectiveness of the use of airpower in war. The lecture will conclude with an overview of the lasting lessons of the air war over Vietnam and the enduring importance of U.S. Airpower.

CONTACT HOURS: 1.0-hour lecture

AP-529 (S): Linebacker I and II

Overview: The culmination of the Vietnam War was a dedicated and hard-hitting strategic bombing campaign against enemy cities and port facilities. Linebacker II is held up as the decisive air activity of the war, and continues to be interpreted as a “war-winning” campaign. Did it in fact win the war? Could it have won the war earlier? This seminar analyzes the successes and failures of the campaign, and the role airpower played in the final battles of the Vietnam War.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Mark Clodfelter, *The Limits of Airpower*, pp. 147-223.
2. Marshall Michel, *The 11 Days of Christmas*, pp. 1-10, 86-122, 139-163, 193-203.

JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

AP-528 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 2b, 2c, 4c, 4f, 5a, 5b, 6f

AP-529 supports the following Joint Learning Areas and Objectives for JPME: 1a, 1c, 3b, 3c, 3d, 3f, 4c, 4f, 5b, 6a, 6b, 6c, 6e, 6f

Day 15

DATE: 14 December 2017

LESSON OVERVIEW

In-Class Comprehensive Final Exam